Heater element KVU

Description

Application
Duct heater for air heating systems, e.g. supplementary heating in ventilation systems in houses or in connection with air duct systems.

Description
Duct Section
Hot-galvanised steel tubes with Lindab Safe sealing ring in both ends.

Terminal Box
Electroplated sheet iron box fitted with two PG16 cable gland. Electric supply though the fitted row of clamps. Proofing IP44.

Heating Elements
Tubular heating elements made of AISI 304 (stainless) with a surface load of 2.5 W/m² for air velocities above 2 m/sec.

Overheating Protection
In the terminal box there is a builtin one pole temperatur limiter (30-87°C) with automatic reset (B2) as well as a thermal cut-out with manual reset (125°C) (B1)

Temperature Regulation
It is recommended to control the air temperature by a room thermostat, e.g. KVT10.

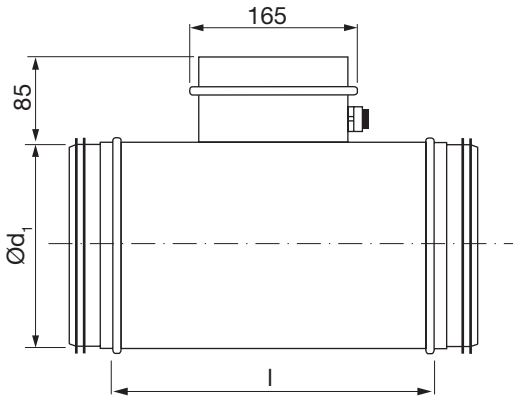
Insulation
The duct heater have to be insulated with non-inflammable insulation, and the distance to flammable material must be at least 150 mm.
NB. The terminal box may **not** get insulated.

Approval
KVU standard duct heaters for 230 Volt, are approved by DEMKO.

Ordering example

KVU	160	230	1000
Product			
Dimension Ød$_1$			
Voltage V			
Power W			

Dimensions



Ød$_1$ nom	l mm
125	320
160	320
200	320
250	280

Installation

KVU can be mounted both verticaly and horisontaly.
Wen installet horisontaly, the terminal box must be placed on the site or head down, not on the top (see Fig. 1) this prevent the posibility of heat transmission to the terminal box.

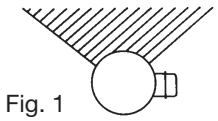


Fig. 1

Heater element KVU

Technical data

The thermal output of a heating surface is expressed by:

$P = q_v \circ \zeta \circ C_p \circ (t_2 - t_1)$ ..... kW]
q_v = volume flow ..... [m^3/s]
ζ = density of the air ..... kg/m^3]
C_p = specific heat capacity of the air ..... [kJ/kg ° K]
t_1 = air temperature before heating element ..... [°C]
t_2 = air temperature after heating element ..... [°C]
By a teperature of 20° C is:
$\zeta = 1{,}2\ kg/m^3$
$C_p = 1\ kJ/kg \cdot K$
$P = 1{,}2 \cdot q_v \cdot \Delta t$

The diagram shows the airs temperature rise, compared to volume flow rate and effect added.